

### Vicinity Map

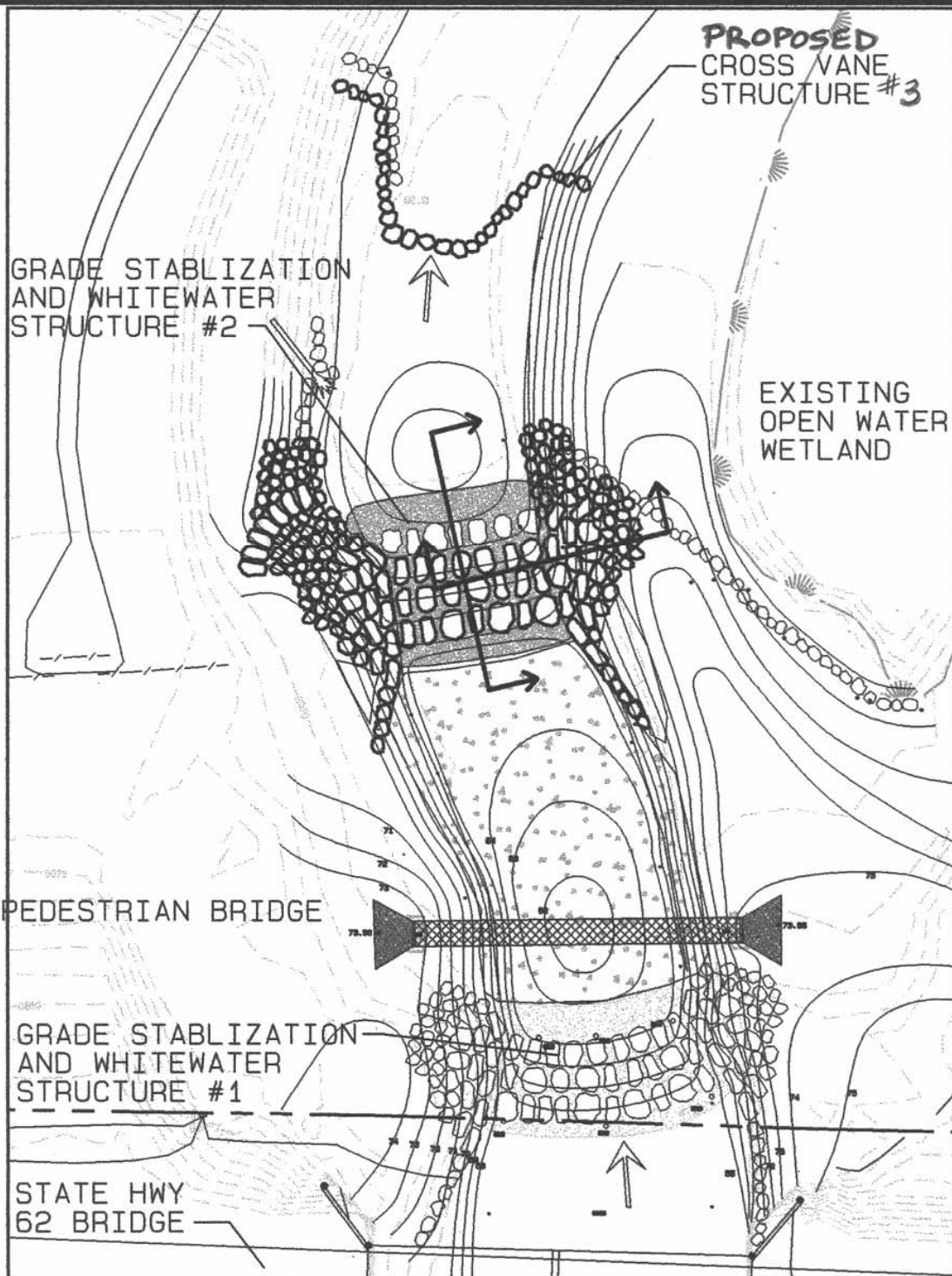
## Uncompahgre River Stabilization & Recreation Improvements

Riverbend Engineering

140A Solomon Dr. Pagosa Springs, CO 81147  
tel: 970-731-0065 Fax: 907-731-0264  
e-mail: cphilips@frontier.net

Scale: 1" = 2000 ft

12-12-05



## SITE PLAN

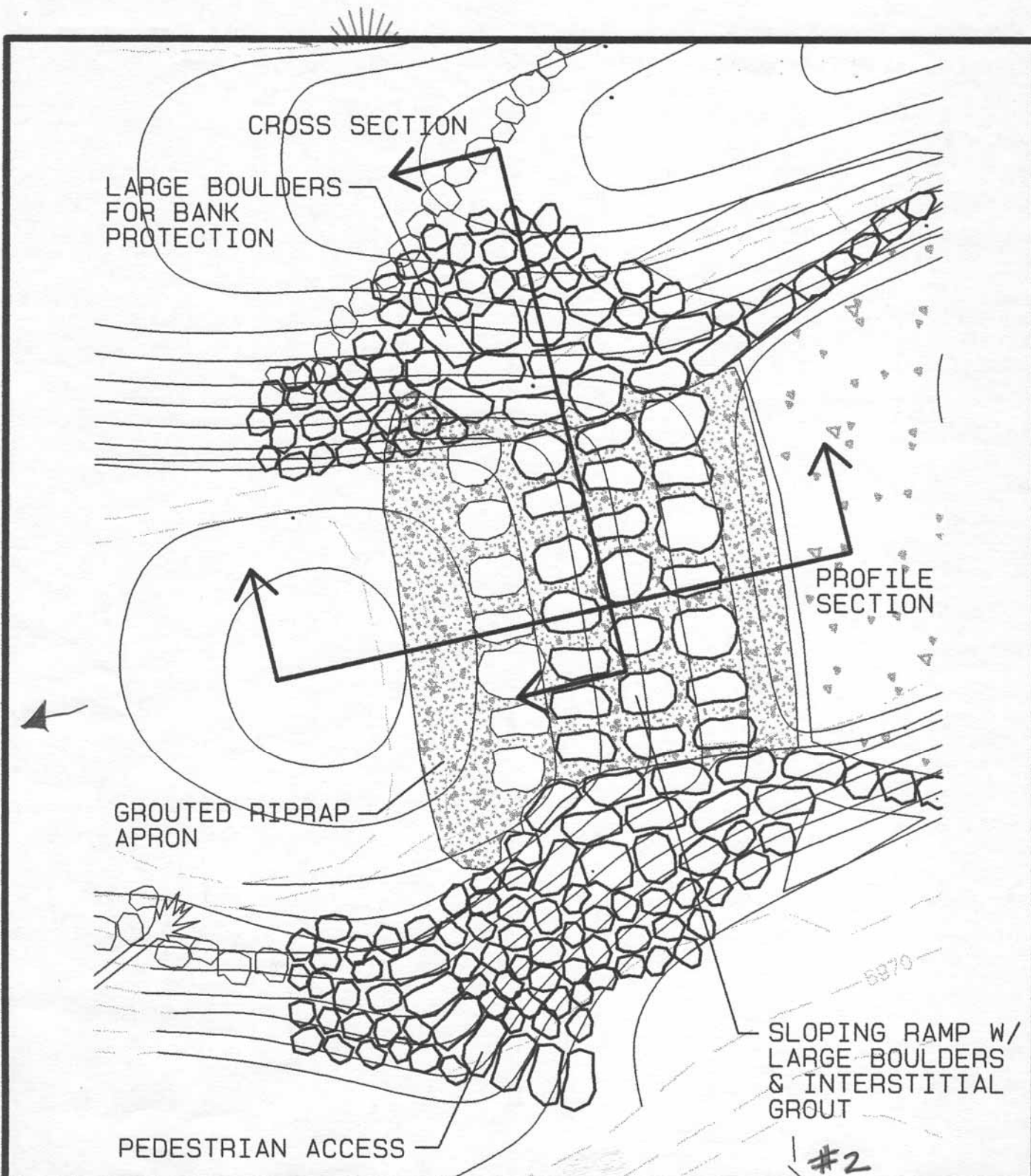
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Scale: 1" = 50 ft

12-12-05



## STREAM STABILIZATION STRUCTURE PLAN

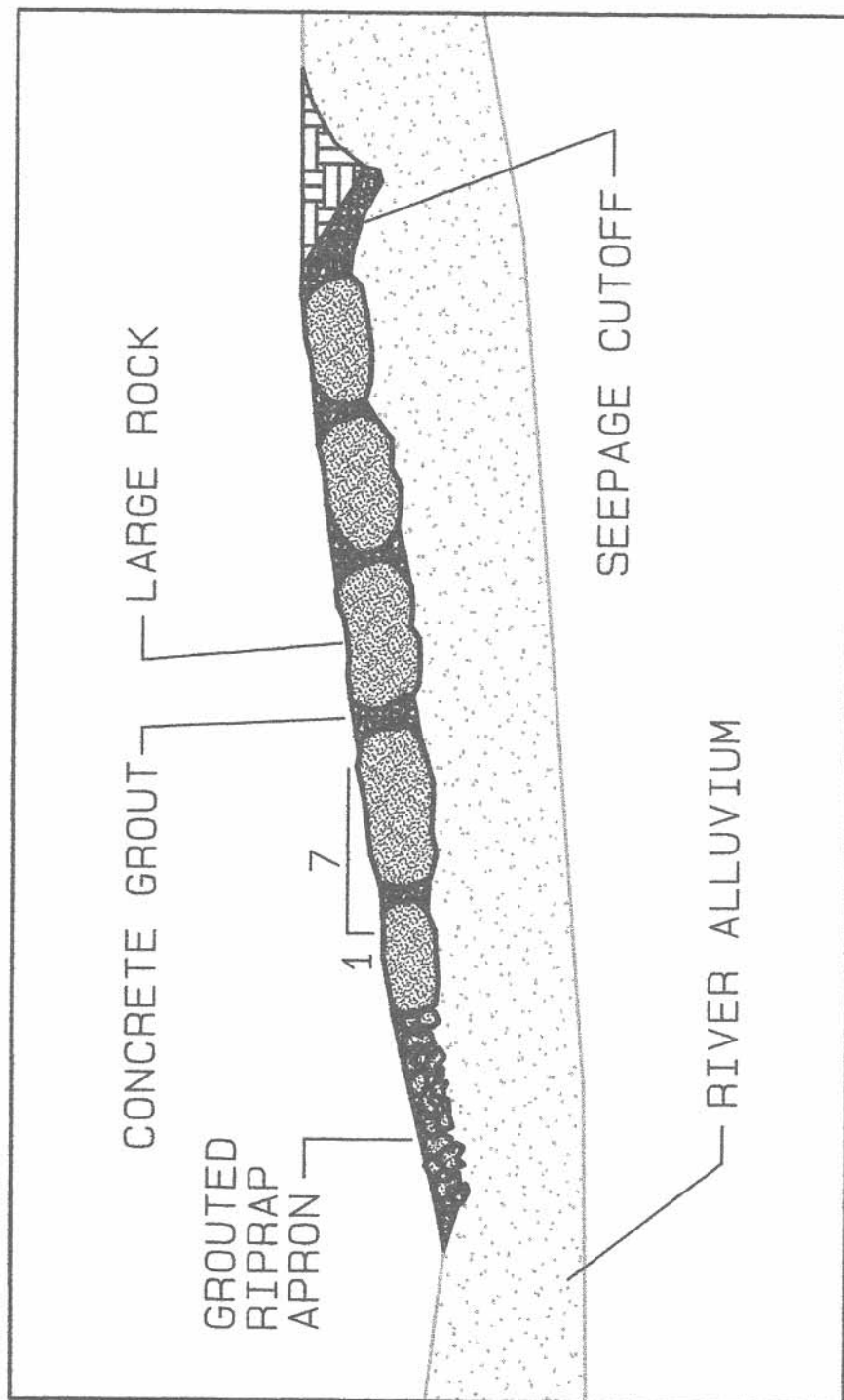
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Scale: 1" = 20 ft

12-12-05



#2

## Structure^Longitudinal Profile

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Scale: Not to Scale

12-12-05



## **Project Quantities**

### **Updated 1-18-06**

#### **Grade Stabilization and Whitewater Structure No. 2:**

##### **Below OHWM:**

Large Boulders, approximately 60 EA, or 75 CY

Medium Rock, approximately 40 CY

Concrete, used as grout between boulders, approximately 60 CY

Alluvial fill, shaping of channel subgrade, approximately 110 CY

##### **Above OHWM:**

Large Boulders, approximately 40 EA, or 50 CY

Concrete, used as grout between boulders, **NONE**

Alluvial fill, shaping of channel sideslopes, approximately 160 CY

Willow transplants between boulders, approximately 40 dormant plants

##### **Notes:**

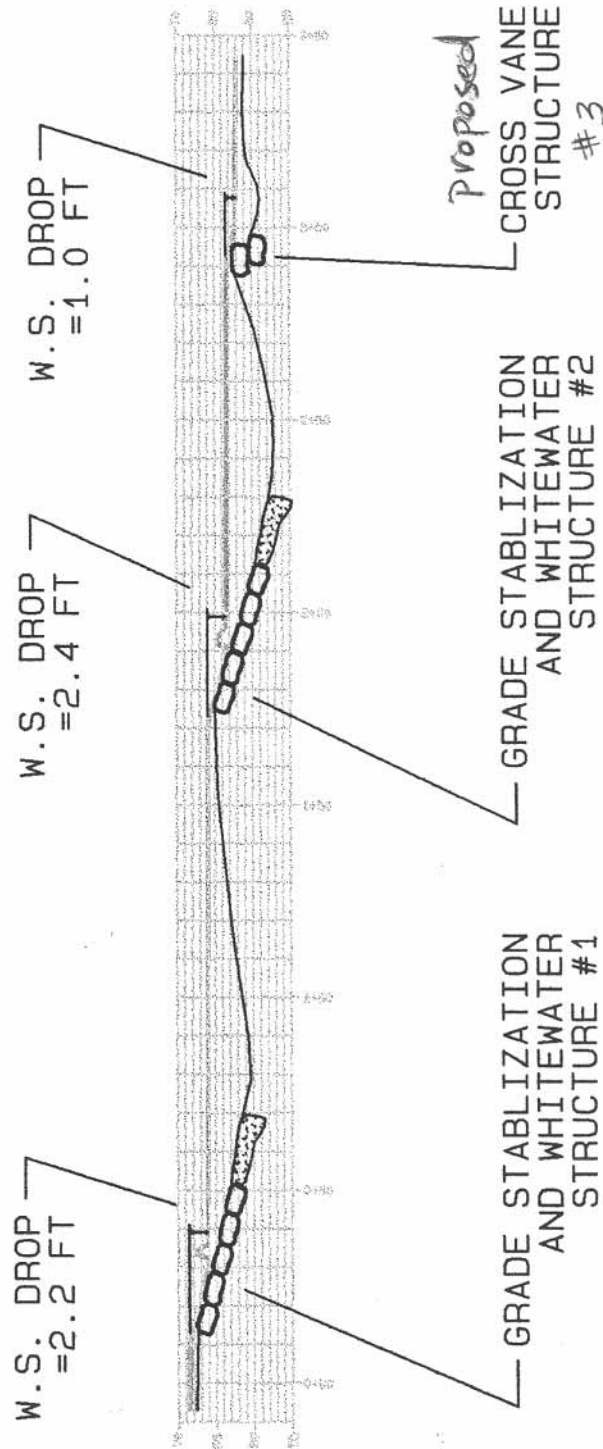
- 1) Exposed concrete surface area is approximately 500 sq ft. The sloping ramp area is nominally 50 ft wide, by 40 ft long (net of 2000 sq ft), and the concrete grout comprises approximately 25% of the surface area.
- 2) Alluvial fill obtained from in-stream sediment deposit, just downstream of work area
- 3) The willow transplant work is expected to be completed in late winter, while the plants are still dormant

#### **~~PROPOSED~~ Cross Vane Structure Downstream, Drop #3:**

Large Boulders, approximately 60 EA, or 75 CY

Alluvial fill, shaping of channel subgrade, approximately 100 CY

**NOTE: Quantities shown in Block 21 of application form 4345 are incorrect. Please cross out that text and refer to this attachment. Thank you.**



## OVERALL PROFILE (PROPOSED)

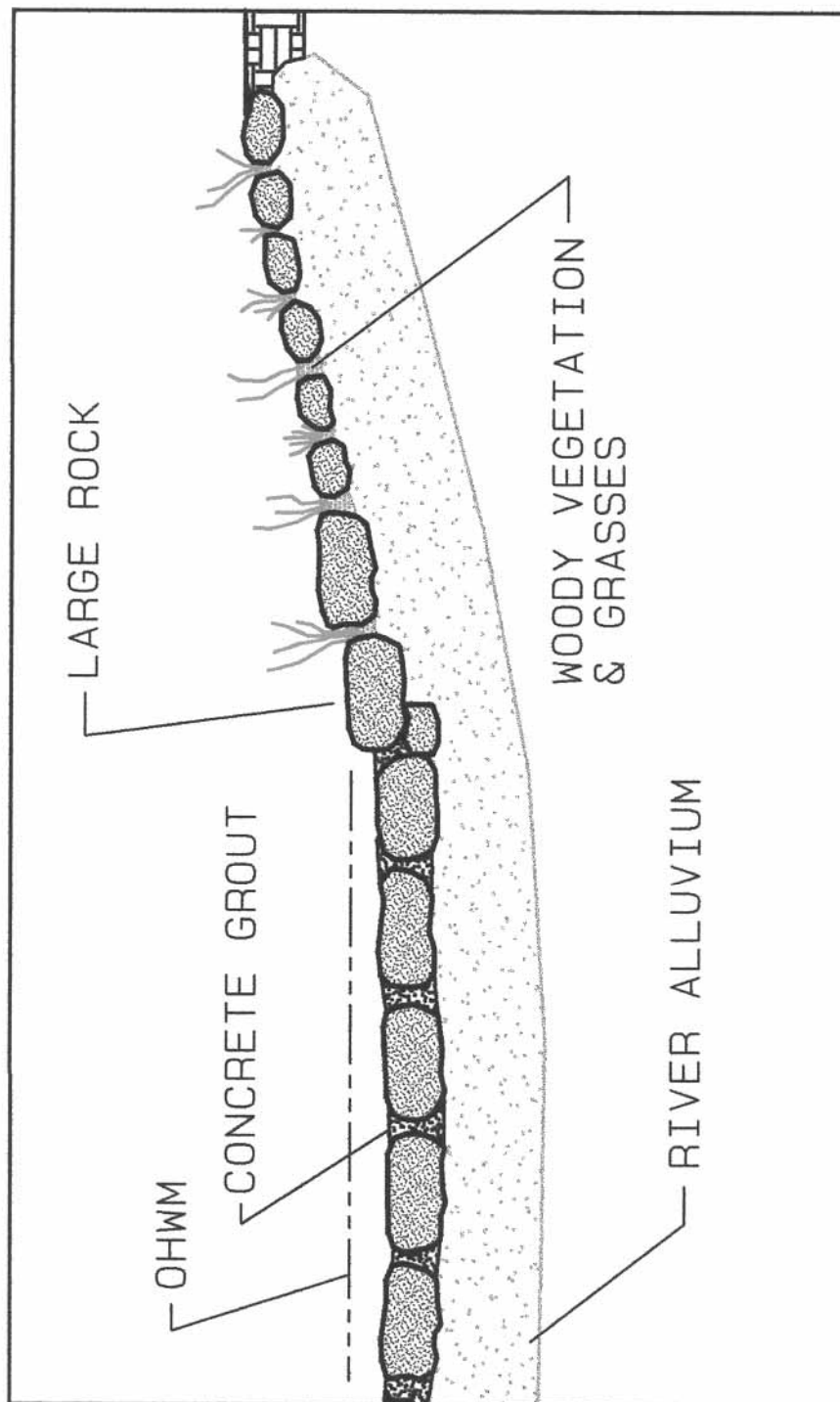
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Scale: 1" = 50 ft

1-18-06



#3

## Structure^Cross Section

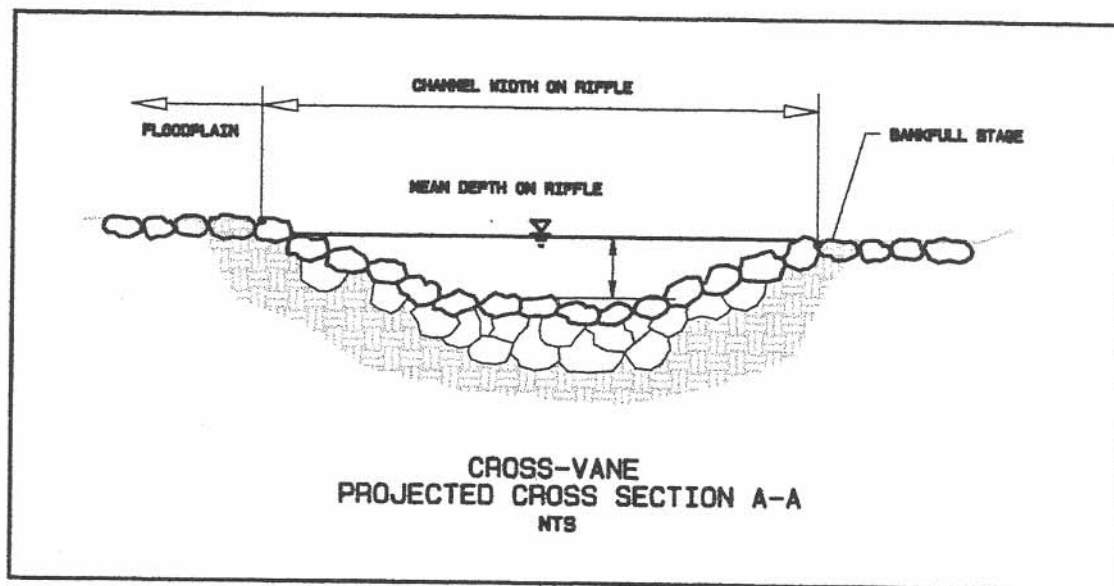
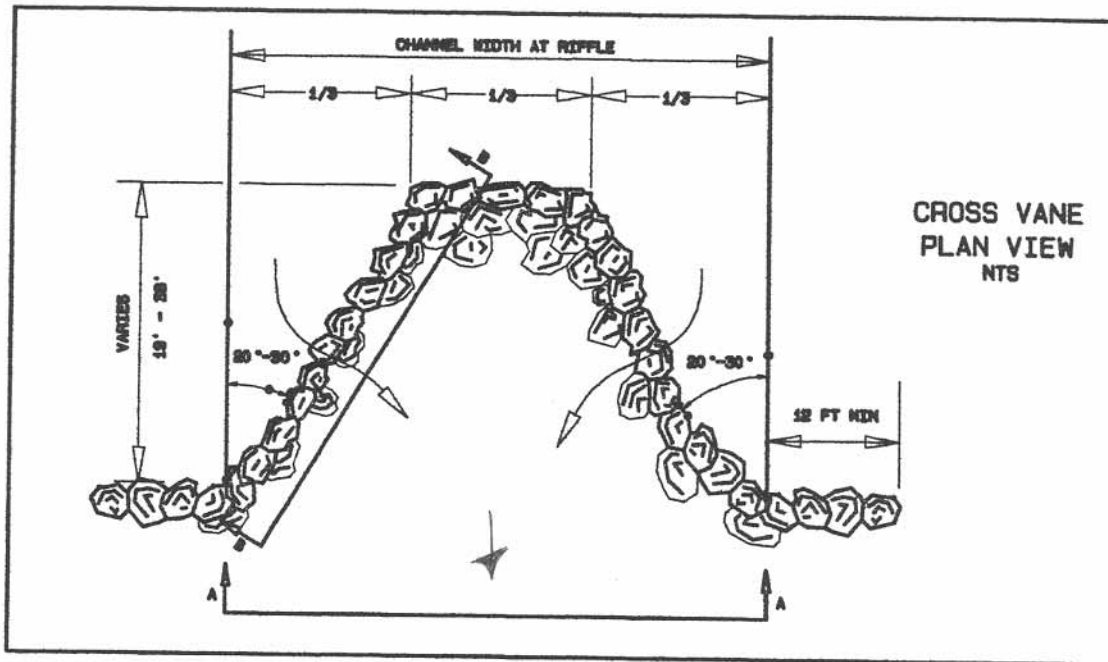
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## PROPOSED CROSS VANE DETAILS, Structure #3

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Uncompahgre River at Ridgway. First restoration design of upper reach, Fall 2002



Uncompahgre River at Ridgway. Failure of first restoration design, Spring 2003 (showing remedial placement of rock to minimize bank cutting)

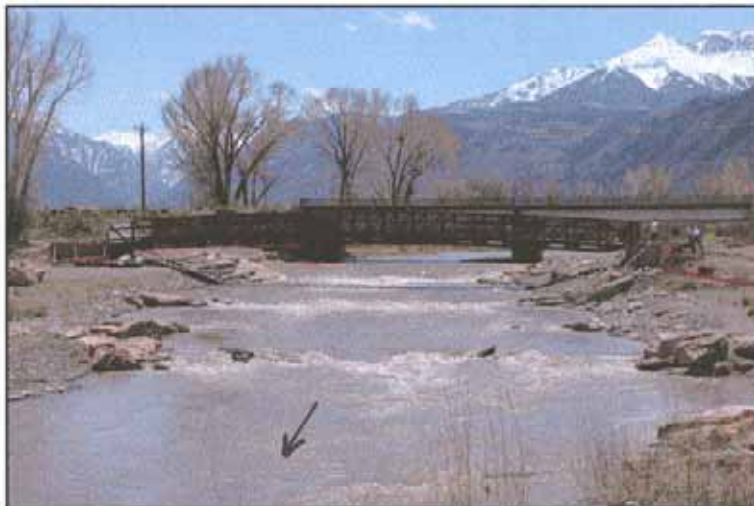


Uncompahgre River at Ridgway. Construction of Second design & lining of bed and banks with rock. Fall 2003



— Hwy bridge

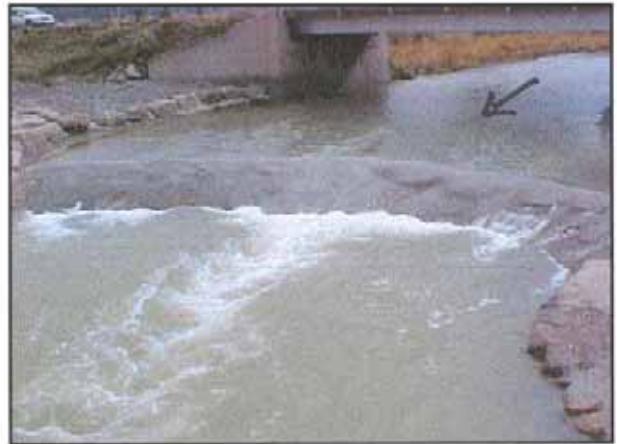
Uncompahgre River at Ridgway, CO. Second design, post construction, Fall 2003



— Hwy bridge

— new pedestrian bridge

Uncompahgre River at Ridgway. Third design, grade stabilization and whitewater structure No. 1, post construction; placement of pedestrian bridge, Spring 2005.



Uncompahgre River in Ridgway. Views of first  
structure from pedestrian bridge  
# 1



Uncompahgre River in Ridgway View of  
second structure from west bank  
# 2



Uncompahgre River in Ridgway View of  
second structure from east bank  
# 2